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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/081,933	02/21/2002	Bill N. Musharbash	INTG-001	2176

7590 08/09/2005

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EXAMINER	
GUILL, RUSSELL L	

ART UNIT	PAPER NUMBER
2123	

DATE MAILED: 08/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/081,933	MUSHARBASH, BILL N.	
	Examiner	Art Unit	
	Russell L. Guill	2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 February 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-56* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-56* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 February 2002* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1 - 56 have been examined. Claims 1 - 56 have been rejected.

Drawings

2. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the drawings contain numerous informalities. The figure labels and element numbers are hand drawn. Formal drawings are required. Applicant is advised to employ the services of a competent patent draftsperson outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1 - 7, 13 - 19, 21 - 24, 27 - 34, 40 - 46, 48 - 52 and 54 - 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lynch (U.S. Patent 6,002,854), in view of Paseman (U.S. Patent 5,745,765).

4.1. **Regarding claims 1, 28 and 51,** Lynch teaches:

4.1.1. A method and apparatus and program storage device for configuring an equipment-based system for a user **(figures 4(1) and 4(2); and column 8, lines 16 - 26; and column 34, lines 32 - 42; and column 35, lines 36 - 57).**

4.1.2. creating a model for each proposed piece of equipment in the system **(column 15, lines 29 - 50)**, the model having properties **(column 15, lines 29 - 50)** and rules **(column 2, lines 45 - 57)**, wherein the rules define conditions and actions **(column 2, lines 45 - 57)**:

4.1.2.1. creating an object for each piece of equipment in the system **(figures 4(1) and 4(2); and column 15, lines 29 - 50).**

4.1.2.2. executing any rules that have as a condition the properties for which value selections received **(column 2, lines 45 - 57)**; and

4.1.2.3. testing to determine if a proposed configuration is valid by examining results of said rule execution (column 2, lines 45 - 57).

4.2. Lynch does not specifically teach:

4.2.1. receiving selections for values for properties for the pieces of equipment;

4.3. Paseman teaches:

4.3.1. receiving selections for values for properties (figure 4C; and column 6, lines 29 - 32).

4.4. The motivation to combine the art of Paseman with the art of Lynch would have been the benefit recited in Paseman that the invention allows product families that might number in the thousands to be easily described in a limited number of expressions, compared with thousands of lines of software code which require expensive maintenance each time products change (column 1, lines 28 - 37).

4.5. Therefore, as discussed above, it would have been obvious to the ordinary artisan at the time of invention to use the art of Paseman with the art of Lynch to produce the claimed inventions.

4.6. Regarding claims 2 and 29, Lynch teaches:

4.6.1. That the model includes a product model, said product model having at least one port (figure 5; and figure 9A(1), element 280; and figures 4(1), 4(2), element port).

4.7. Regarding claims 3 and 30, Lynch teaches:

4.7.1. That the port has at least one connector and at least one traffic type (figure 4(2), element 126, and associated SCSI cable port 3 where SCSI obviously defines a traffic type).

4.8. Regarding claims 4 and 31, Lynch teaches:

4.8.1. the model includes a cable model, said cable model comprising connector and cable specifications (figure 4(1), elements cable and connector; and column 17, lines 35 - 40).

4.9. Regarding claims 5 and 32, Lynch teaches:

4.9.1. the cable model further includes a cable to connector association (figure 4(1), elements cable and connector; and column 17, lines 35 - 40).

4.10. Regarding claims 6 and 33, Lynch does not specifically teach:

4.10.1. Receiving a selection made by a user for a value for a property for said piece of equipment.

4.11. Regarding claims 6 and 33, Paseman teaches:

4.11.1. Receiving a selection made by a user for a value for a property (figures 4C and 5; and column 6, lines 27 - 31).

4.12. Regarding claims 7 and 34, Lynch does not specifically teach:

4.12.1. displaying effects of said execution of rules to a user.

4.13. **Regarding claims 7 and 34**, Paseman teaches:

4.13.1. displaying effects of said execution of rules to a user (**figure 5, elements rule engine and user interface**).

4.14. **Regarding claims 13 and 40**, Lynch teaches:

4.14.1. A model includes racking information regarding a piece of equipment (**figure 3(2), element 90, items Rack Bay 1 and Rack Bay 2**).

4.15. **Regarding claims 14 and 41**, Lynch teaches:

4.15.1. utilizing racking templates along with said model to determine if said model is compatible with a specific racking implementation (**figure 6(2), elements 228 and 230**).

4.16. **Regarding claims 15 and 42**, Lynch teaches:

4.16.1. generating a price quote based on the configuration (**column 29, lines 25 - 35**).

4.17. **Regarding claims 16, 43 and 52**, Lynch teaches:

4.17.1. A method and apparatus and program storage device for adding a piece of equipment to a design of an equipment-based system (**figures 4(1) and 4(2); and column 1, lines 15 - 18; and column 8, lines 16 - 26; and column 34, lines 32 - 42; and column 35, lines 36 - 57**), the added piece of equipment having a model (**column 15, lines 29 - 50**), the model having associated properties (**column 15, lines 29 - 50**) and rules (**column 2, lines 45 - 57**), wherein the rules define conditions and actions (**column 2, lines 45 - 57**), the method comprising:

4.17.2. creating an object for said added piece of equipment (**figures 4(1) and 4(2); and column 15, lines 29 - 50**).

4.17.3. executing any rules that have as a condition said property (**column 2, lines 45 - 57**); and

4.17.4. testing to determine if any of said executed rules necessitates the change of said object by executing at least one object behavior rule (**column 2, lines 45 - 57**).

4.18. **Regarding claims 16, 43 and 52**, Lynch does not specifically teach:

4.18.1. receiving a selection for a value for a property for said piece of equipment ;

4.19. **Regarding claims 16, 43 and 52**, Paseman teaches:

4.19.1. receiving a selection for a value for a property (**figure 4C; and column 6, lines 29 - 32**).;

4.20. **Regarding claims 17 and 44**, Lynch does not specifically teach:

4.20.1. The method of claim 16, wherein said receiving includes receiving a selection made by a user for a value for a property for said added piece of equipment (**figure 4C; and column 6, lines 29 - 32**).

4.21. **Regarding claim 17 and 44**, Paseman teaches:

4.21.1. That receiving includes receiving a selection made by a user for a value for a property (figure 4C; and column 6, lines 29 - 32).

4.22. **Regarding claims 18 and 45**, Lynch does not specifically teach:

4.22.1. The method of claim 16, further comprising displaying effects of said execution of rules to a user.

4.23. **Regarding claims 18 and 45**, Paseman teaches:

4.23.1. displaying effects of said execution of rules to a user (**figure 5, especially elements Rule File, Standard Rule Engine and User Interface**).

4.24. **Regarding claims 19 and 46**, Lynch teaches:

4.24.1. A necessitated change of said object includes a change to port quantity (**column 10, lines 20 - 30**).

4.25. **Regarding claims 21, 48 and 54**, Lynch teaches:

4.25.1. A method and apparatus and program storage device for adding a connection between pieces of equipment in a design of an equipment-based system (**figures 4(1) and 4(2); and column 1, lines 15 - 18; and column 8, lines 16 - 26; and column 34, lines 32 - 42; and column 35, lines 36 - 57**), the pieces of equipment each having a model (**column 15, lines 29 - 50**), the method comprising:

4.25.2. comparing port detail, payload, protocol, signal types, and cabling requirements in the model for each of the pieces of equipment (**figure 9A(1), 9A(2), and 9B; column 32, lines 65 - 67; and column 1, lines 15 - 16; and column 13, lines 10 - 28**);

4.25.3. indicating the connection is not valid if ports at end-points of each of the pieces of equipment are not available for connection equipment (**figure 9A(1), 9A(2), and 9B; column 32, lines 65 - 67; and column 1, lines 15 - 16; and column 13, lines 10 - 28**);

4.25.4. indicating the connection is not valid if a fixed connection rule is not available for the connection and payload carried by both of said end-points is not compatible equipment (**figure 9A(1), 9A(2), and 9B; column 32, lines 65 - 67; and column 1, lines 15 - 16; and column 13, lines 10 - 28**);

4.25.5. indicating the connection is not valid if a fixed connection rule is not available for the connection, protocol and signal type carried by both of said endpoints is not compatible, and a converter is not available to bridge the gap between said incompatible protocol and/or signal types equipment (**figure 9A(1), 9A(2), and 9B; column 32, lines 65 - 67; and column 1, lines 15 - 16; and column 13, lines 10 - 28**);

4.25.6. indicating the connection is not valid if a fixed connection rule is not available for the connection, the medium at the end-points is not compatible, and a converter is not available to bridge the gap between said incompatible media equipment (**figure 9A(1), 9A(2), and 9B; column 32, lines 65 - 67; and column 1, lines 15 - 16; and column 13, lines 10 - 28**).

4.26. **Regarding claims 21, 48 and 54**, Lynch does not specifically teach:

4.26.1. indicating the connection is not valid if the connection is listed in a compatibility issues table and no resolution code is listed which can be executed.

4.27. **Regarding claims 21, 48 and 54**, Paseman teaches:

4.27.1. indicating the connection is not valid if the connection is listed in a compatibility issues table and no resolution code is listed which can be executed (**column 6, lines 14 - 42**).

4.28. **Regarding claims 22, 49 and 55**, Lynch teaches:

4.28.1. A method and apparatus and program storage device for adding a connection between pieces of equipment in a design of an equipment-based system (**figures 4(1) and 4(2); and column 1, lines 15 - 18; and column 8, lines 16 - 26; and column 34, lines 32 - 42; and column 35, lines 36 - 57**) where one of the pieces of equipment is passive (**column 17, lines 35 - 40**), the pieces of equipment each having a model (**column 15, lines 29 - 50**), the method comprising:

4.28.1.1. determining if signals are defined for any passive ports in the pieces of equipment (**column 1, lines 15 - 16; and column 13, lines 10 - 28**).

4.28.1.2. indicating that the connection is not valid if signals are defined for any passive ports and signals at the connection endpoints are incompatible (**column 1, lines 15 - 16; and column 13, lines 10 - 28**).

4.28.1.3. isolating all cables with a common cable type specified at the connection endpoints (**column 1, lines 15 - 16; and column 13, lines 10 - 28**).

4.28.1.4. indicating that the connection is not valid if no matching cables are found (**column 1, lines 15 - 16; and column 13, lines 10 - 28**).

4.28.1.5. isolating all cables and connectors that mate with the connectors specified at the connection endpoints (**column 1, lines 15 - 16; and column 13, lines 10 - 28**).

4.28.1.6. indicating that the connection is not valid if no matching cables with connectors are found (**column 1, lines 15 - 16; and column 13, lines 10 - 28**).

4.29. **Regarding claims 22, 49 and 55**, Lynch does not specifically teach:

4.29.1. indicating that the connection is not valid if the connection is listed in compatibility issues and no executable resolution code is listed.

4.30. **Regarding claims 22, 49 and 55**, Paseman teaches:

4.30.1. indicating that the connection is not valid if the connection is listed in compatibility issues and no executable resolution code is listed (**column 6, lines 14 - 42**).

4.31. **Regarding claims 23, 50 and 56,** Lynch teaches:

4.31.1. A method and apparatus and program storage device for selecting a cable to connect two or more pieces of equipment in a design of an equipment-based system (**column 6, lines 32 - 50; and column 5, lines 25 - 50; and column 34, lines 32 - 42; and column 35, lines 36 - 57**).

4.31.2. isolating all cables of a common cable type specified at each of the pieces of equipment (**column 1, lines 15 - 16; and column 13, lines 10 - 28**).

4.31.3. indicating no cable is available if no cables match said common cable type (**column 1, lines 15 - 16; and column 13, lines 10 - 28**);

4.31.4. isolating all cables with connectors that mate with ones specified at each of the pieces of equipment (**column 1, lines 15 - 16; and column 13, lines 10 - 28**);

4.31.5. indicating no cable is available if no cables have connectors that mate with the ones specified at each of the pieces of equipment and no adapter is available for either piece of equipment (**column 1, lines 15 - 16; and column 13, lines 10 - 28**);

4.31.6. isolate all cables with diameters within a minimum and maximum value of a composite cabling specification (**column 1, lines 15 - 16; and column 13, lines 10 - 28**);

4.31.7. indicating no cable is available if no cables are available with diameters within said minimum and maximum value of the composite cabling specification (**column 1, lines 15 - 16; and column 13, lines 10 - 28**);

4.31.8. determining if a preferred cable manufacturer is specified (**column 1, lines 15 - 16; and column 13, lines 10 - 28**).

4.31.9. isolating all cables made by the preferred cable manufacturer if one is specified (**column 1, lines 15 - 16; and column 13, lines 10 - 28**).

4.32. **Regarding claims 23, 50 and 56,** Lynch does not specifically teach:

4.32.1. displaying all cable choices to a user for selection if more than one cable is still available.

4.33. **Regarding claims 23, 50 and 56,** Paseman teaches:

4.33.1. displaying choices to a user for selection (**figure 4C**).

4.34. **Regarding claim 24,** Lynch teaches:

4.34.1. An apparatus for configuring an equipment-based system for a user (**column 34, lines 32 - 43**), the apparatus comprising:

4.34.2. a model creator (**column 15, lines 29 - 50**);

4.34.3. an object creator coupled to said model creator (**column 15, lines 29 - 50**);

4.34.4. a proposed configuration tester coupled to said rules engine (**column 2, lines 45 - 57**).

4.35. **Regarding claim 24**, Lynch does not specifically teach:

4.35.1. a value selection receiver coupled to said object creator.

4.35.2. a rules engine coupled to said value selection receiver.

4.36. **Regarding claim 24**, Paseman teaches:

4.36.1. a value selection receiver coupled to said object creator (**figure 4C; and column 6, lines 29 - 32**).

4.36.2. a rules engine coupled to said value selection receiver (**figure 5, especially standard rules engine and user interface; and figure 4C**).

4.37. **Regarding claim 27**, Lynch teaches:

4.37.1. An apparatus for selecting a cable to connect two or more pieces of equipment in a design of an equipment-based system (**column 34, lines 32 - 43; column 6, lines 32 - 50; and column 5, lines 25 - 50**), the apparatus comprising:

4.37.2. a common cable type cable isolator equipment (**column 1, lines 15 - 16; and column 13, lines 10 - 28**).

4.37.3. a no matching cable indicator coupled to said common cable type cable isolator (**column 1, lines 15 - 16; and column 13, lines 10 - 28**).

4.37.4. a cable diameter cable isolator coupled to said no matching cable indicator (**column 1, lines 15 - 16; and column 13, lines 10 - 28**).

4.37.5. a no available cable indicator coupled to said cable diameter cable isolator (**column 1, lines 15 - 16; and column 13, lines 10 - 28**).

4.37.6. a specified preferred cable manufacturer determiner coupled to said no available cable indicator (**column 1, lines 15 - 16; and column 13, lines 10 - 28**).

4.37.7. a preferred cable manufacturer cable isolator coupled to said specified preferred cable manufacturer determiner (**column 1, lines 15 - 16; and column 13, lines 10 - 28**).

4.38. **Regarding claim 27**, Lynch does not specifically teach:

4.38.1. A cable choice displayer coupled to said preferred cable manufacturer cable isolator.

4.39. **Regarding claim 27**, Paseman teaches:

4.39.1. A choice displayer (**figure 4C**).

5. **Claims 8 and 35** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lynch and Paseman, further in view of Apte (Apte, Chidanand; Morgenstern, Leora; Hong, Se June; "AI at IBM Research", IEEE Intelligent Systems and their applications, Nov-Dec 2000, Volume 15, Issue 6).

   5.1. **Regarding claims 8 and 35**, Lynch does not specifically teach:

      5.1.1. creating a model using an extensible markup language.

   5.2. **Regarding claims 8 and 35**, Apte teaches:

      5.2.1. creating a model using an extensible markup language **(page 52, left-side column, first paragraph)**.

   5.3. The motivation to use the art of Apte with the art of Lynch would have been the benefits recited in Apte that the library which uses the XML rules enables the communication of business policies between retailers and applications **(page 51 - 52, last paragraph on page 51 continuing on the first paragraph of page 52)**. Therefore, as discussed above, it would have been obvious to the ordinary artisan at the time of invention to use the art of Apte with the art of Lynch to produce the claimed invention.

6. **Claims 9 and 36** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lynch and Paseman, in view of Coyne (Coyne, John P.; "The desirability of embedding an expert system shell within a relational DBMS", Proceedings of the International Conference on Developing and Managing Expert System Programs, 1991).

   6.1. **Regarding claims 9 and 36**, Lynch does not specifically teach:

      6.1.1. creating a model in a relational database.

   6.2. **Regarding claims 9 and 36**, Coyne teaches:

      6.2.1. creating a model in a relational database **(page 12, section 2 Embedding a shell, first paragraph)**.

7. The motivation to use the art of Coyne with the art of Lynch would have been the benefits recited in Coyne of portability and security **(section 3.3 Portability and section 3.4 security)**. Therefore, as discussed above, it would have been obvious to the ordinary artisan at the time of invention to use the art of Coyne with the art of Lynch to produce the claimed invention.

8. **Claims 10 and 37** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lynch and Paseman, in view of MetraByte (MetraByte catalog, summer 1987).

   8.1. **Regarding claims 10 and 37**, Lynch does not specifically teach:

      8.1.1. said model partially comprises a smart part number.

8.2. **Regarding claims 10 and 37**, MetraByte teaches:

8.2.1. a smart part number **(page 168, section 19 inch mounting racks, part numbers RFM-06 and RTT-02)**.

8.3. The motivation to use the art of MetraByte with the art of Lynch would have been the utility of the additional information coded into the part number for the purpose of configuring a system. Therefore, as discussed above, it would have been obvious to the ordinary artisan at the time of invention to use the art of MetraByte with the art of Lynch to produce the claimed invention.

9. **Claims 11 - 12 and 38 - 39** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lynch and Paseman, in view of NexpertObject (Nexpert Object Fundamentals, 1988, Neuron Data).

9.1. **Regarding claims 11 and 38**, Lynch does not specifically teach:

9.1.1. each rule has a condition statement and an effect statement.

9.2. **Regarding claims 11 and 38**, NexpertObject teaches:

9.2.1. each rule has a condition statement and an effect statement **(Chapter 8 Rules, page 1, last paragraph and figure)**.

9.3. **Regarding claims 12 and 39**, Lynch does not specifically teach:

9.3.1. condition statement has at least one variable token and evaluating said condition statement includes replacing said variable tokens with their corresponding values.

9.4. **Regarding claims 12 and 39**, NexpertObject teaches:

9.4.1. condition statement has at least one variable token and evaluating said condition statement includes replacing said variable tokens with their corresponding values **(Chapter Knowledge Design, page 48, the example rule in the top half of the page)**.

9.5. The motivation to use the art of NexpertObject with the art of Lynch would have been the benefits recited in NexpertObject that the rule format is original and powerful, and a rule may be processed in either the forward or backward direction **(Chapter 8 Rules, page 1)**. Therefore, as discussed above, it would have been obvious to the ordinary artisan at the time of invention to use the art of NexpertObject with the art of Lynch to produce the claimed invention.

10. **Claims 20, 47 and 53** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lynch, in view of NexpertObject (Nexpert Object Fundamentals, 1988, Neuron Data).

10.1. **Regarding claims 20, 47 and 53**, Lynch teaches:

10.1.1. A method and apparatus and program storage device for adding a piece of equipment to a design of an equipment-based system **(figures 4(1) and 4(2); and column 1, lines 15 - 18; and**

column 8, lines 16 - 26; and column 34, lines 32 - 42; and column 35, lines 36 - 57), the added piece of equipment having a model (**column 15, lines 29 - 50**), the model having associated properties (**column 15, lines 29 - 50**) and rules (**column 2, lines 45 - 57**), wherein the rules define conditions and actions (**column 2, lines 45 - 57**) and are bi-directional, the method comprising:

10.1.2. creating an object for said added piece of equipment (**figures 4(1) and 4(2); and column 15, lines 29 - 50**).

10.2. **Regarding claims 20, 47 and 53**, Lynch does not specifically teach:

10.2.1. A method for adding a piece of equipment to a design of an equipment-based system, the added piece of equipment having a model, the model having associated properties and rules, wherein the rules define conditions and actions ***and are bi-directional***.

10.2.2. receiving a selection for a value for a property for said added piece of equipment;

10.2.3. executing any rules that have as a condition said property, producing effects;

10.2.4. executing any rules that have as a condition said effects;

10.2.5. testing to determine if any of said executed rules necessitates the change of said object by executing at least one object behavior rule.

10.3. **Regarding claims 20, 47 and 53**, NexpertObject teaches:

10.3.1. rules define conditions and actions (**chapter 8 Rules, page 1**) ***and are bi-directional*** (**chapter 8 Rules, page 1**).

10.3.2. receiving a selection for a value for a property (**chapter 10 Knowledge Processing, pages 10 - 11**);

10.3.3. executing any rules that have as a condition said property, producing effects (**chapter 8 Rules, page 1 and pages 3 - 4 and pages 17 - 18; and chapter Knowledge Design, pages 47 - 48**);

10.3.4. executing any rules that have as a condition said effects (**chapter 8 Rules, page 1 and pages 3 - 4 and pages 17 - 18; and chapter 10 Knowledge Processing, page 7; and chapter Knowledge Design, pages 47 - 48**);

10.3.5. testing to determine if any of said executed rules necessitates the change of said object by executing at least one object behavior rule (**chapter 8 Rules, page 1 and pages 3 - 4 and pages 17 - 18 and pages 36 - 37; and chapter 10 Knowledge Processing, page 7; and chapter Knowledge Design, pages 47 - 48**).

10.4. The motivation to use the art of NexpertObject with the art of Lynch would have been the benefits recited in NexpertObject that the rule format is original and powerful, and a rule may be processed in either the forward or backward direction (**Chapter 8 Rules, page 1**). Therefore, as

discussed above, it would have been obvious to the ordinary artisan at the time of invention to use the art of NexpertObject with the art of Lynch to produce the claimed invention.

11. **Claims 25 - 26** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lynch in view of common knowledge in the art.

11.1. **Regarding claim 25**, Lynch teaches:

11.1.1. An apparatus for adding a connection between pieces of equipment in a design of an equipment-based system **(column 34, lines 32 - 43; and figures 4(1) and 4(2); and column 1, lines 15 - 18; and column 8, lines 16 - 26)**, the pieces of equipment each having a model **(column 15, lines 29 - 50)**.

11.1.2. a port detail, payload, protocol, signal types, and cabling requirements comparison **(figure 9A(1), 9A(2), and 9B; column 32, lines 65 - 67; and column 1, lines 15 - 16; and column 13, lines 10 - 28)**.

11.1.3. an invalid connection indicator coupled to said port detail, payload, protocol, signal types, and cabling requirements comparison **(figure 9A(1), 9A(2), and 9B; column 32, lines 65 - 67; and column 1, lines 15 - 16; and column 13, lines 10 - 28)**.

11.2. **Regarding claim 25**, Lynch does not specifically teach:

11.2.1. a port detail, payload, protocol, signal types, and cabling requirements ***comparer***.

11.2.2. an invalid connection indicator coupled to said port detail, payload, protocol, signal types, and cabling requirements ***comparer***.

11.3. **Regarding claim 25**, Official Notice is taken that it was old and well known in the art at the time of invention to use a comparer. The motivation would have been to provide a functional unit to compare the properties of a connection. Therefore, as discussed above, it would have been obvious to the ordinary artisan at the time of invention to use common knowledge in the art with the art of Lynch to produce the claimed invention.

11.4. **Regarding claim 26**, Lynch teaches:

11.4.1. An apparatus for adding a connection between pieces of equipment in a design of an equipment-based system **(column 34, lines 32 - 43; and figures 4(1) and 4(2); and column 1, lines 15 - 18; and column 8, lines 16 - 26)** where one of the pieces of equipment is passive **(column 17, lines 35 - 40)**, the pieces of equipment each having a model **(column 15, lines 29 - 50)**.

11.4.2. Determining defined signals **(column 1, lines 15 - 16; and column 13, lines 10 - 28)**.

11.4.3. an invalid connection indicator coupled to a signal determining method **(column 1, lines 15 - 16; and column 13, lines 10 - 28)**.

11.4.4. a cable and connection isolator coupled to said invalid connection indicator **(column 1, lines 15 - 16; and column 13, lines 10 - 28)**.

11.5. **Regarding claim 26,** Lynch does not specifically teach:

11.5.1. a defined signal ***determiner***.

11.5.2. an invalid connection indicator coupled ***to said defined signal determiner***.

11.6. **Regarding claim 26,** Official Notice is taken that it was old and well known in the art at the time of invention to use a determiner. The motivation would have been to provide a functional unit to determine properties of signals. Therefore, as discussed above, it would have been obvious to the ordinary artisan at the time of invention to use common knowledge in the art with the art of Lynch to produce the claimed invention.

Conclusion

12. **Examiner's Note:** Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in their entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.
13. The prior art made of record and not relied upon is considered pertinent to the applicant's disclosure:
    - **13.1.** Gilpin (U.S. Patent Number 6,836,766)
    - **13.2.** Shah (U.S. Patent Number 6,865,524)
    - **13.3.** Kawas (U.S. Patent Number 6,058,262)

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Russell L. Guill whose telephone number is 571-272-7955. The examiner can normally be reached on Monday - Friday 9:00 AM - 5:30 PM.
15. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on 571-272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Any inquiry of a general nature or relating to the status of this application should be directed to the TC2100 Group Receptionist: 571-272-2100.

16. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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